DETAILED ACTION

1. Acknowledgment is made for the applicant's response and amendment filed on 01/14/2011.

Remarks

2. The claims are presented as follows:

- Claims 4-17, 20, 22-25, 27, 29-32, 39-43, 48-50 canceled.
- Claims 1-3, 18-19, 21, 26, 28, 33-38, 44-47, 51-52 pending.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 18-19, 21, 26, 28, 33-38, 44-47, 51-52 rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal Patent. No (US. 6,963,570) in view of Johansson et al. Pub. No. (US 2002/0026620 A1).

As per **claim 1** Agarwal teaches a method comprising:

receiving a data packet at an input (input interface 1301 FIG.4) interface (receiving data at an input interface col.7, line 36-59), said data packet comprising a header section (header portion 1230 FIG.3) and a pay-load section (payload portion 1240 FIG.3) (data routed contains header section and payload section col.1, line 43-52; FIG.3), said header section comprising a compressed header section (header portion 1330 FIG.4) containing coded information including routing information (compressed header portion contains coded and routing information col.1, line 43-52; col.7, line 42-49; col.8, line 48-61);

decompressing (decompressing 1730 FIG.7) said routing information from said compressed header section (decompressing header portion col.1, line 19-28; col.12, line 61;FIG.8B); including at least a part of said decompressed routing information into said data packet (data packet contains routing information col.1, line 19-28;col.12, line 61;col.13, line 3-19);

routing said data packet to an output interface (routing data packet to an output interface col.8, line 3-12; FIG.4); and

forwarding said data packet to said output interface (an output interface continually receives data packets col.8, line 56-62), wherein said routing comprises ascertaining said routing information from said compressed header section (compressed header portion contains routing information col.1, line 43-52; col.12, line 9-25; FIG.6B).

Agarwal does not explicitly teach wherein said coded information is left unchanged by said routing and forwarding data packet to said output interface

However, Johansson teaches a system and method for routing information in a header compression and decompression applications (see Abstract) The system recognizes some header information will not change during a given packet flow or routing and forwarding to an output interface, examples of such unchanging (also referred to as stationary or static) header information include IP source and destination addresses. This unchanging header information will contribute an unchanging component to the checksums calculated in connection with the headers of the packet

flow ([0009] [0023] [0026] FIG.4) in order to provide optimal efficiency and greater bandwidth in routing and forwarding such data packets ([0009] [0023] [0026] FIG.4)

It would have been obvious to a person having ordinary skilled in the art at the time the invention was made to have modified Agarwal by the teaching of Johansson to leave the coded information unchanged by said routing and forwarding data packet to said output interface in order to provide optimal efficiency and greater bandwidth in routing and forwarding such data packets ([0009] [0023] [0026] FIG.4).

As per **claim 2** Agarwal teaches a method according to claim 1, wherein said ascertaining comprises reading a first header compression context identifier from said compressed header section (reading header identifiers from compressed header portion col.9, line 2-10; col.11, line 33-41; FIG.5B).

As per **claim 3** Agarwal teaches a method according to claim 1, wherein said routing comprises assigning a second header compression context identifier to said data packet and replacing said first header compression context identifier by said second header compression context identifier in said data packet (replacing the header compression identifier with other identifiers when transmitting the data packet over the communication link col.4, line 61-65; col.7, line 46-54; FIGs.5).

As per **claim 18** Agarwal teaches a method according to claim 1, wherein said part of said decompressed header is attached to said data packet in front of said header section (decompressed header is combined with data packet at the combiner 1730 FIG.7), such that said part of said decompressed header can be forwarded before said

header section (sending combined decompressed header and payload 1804 col.13, line 13-19 FIG.8B).

As per **claim 19** Agarwal teaches a method according to claim 1, comprising removing at least a part of said decompressed header from said data packet (replacing decompressed headers with others in data packets col.5, line 1-4; FIG.7).

As per **claim 21** Agarwal teaches a method according to claim 2, comprising classifying said data packet according to a service class (decompressing coded information from compressed header portion into individual cells that were transmitted in frames i.e. classification codes col.12, line 37-60; FIG.7)

As per **claim 26** Agarwal teaches a method accord to claim 21, wherein said forwarding comprises placing said data packet into one of a plurality of queues, the chosen queue corresponding to a value of said classification code point (classifying data packet into a plurality of queues col.12, line 18-25; FIG.6B).

As per **claim 28** Agarwal teaches a method according to claim 1, wherein said forwarding comprises radio or microwave transmission of said data packet (ATM transmission is done through radio link system col.3, line 65).

As per **claim 33** Agarwal teaches an apparatus, comprising an input interface (input interface 1301 FIG.4) configured to receive at least one data packet containing compressed data (receiving data at an input interface col.7, line 36-59), a decompressor (header decompressor 1730 FIG.7) configured to communicate with said input interface and to decompress said compressed data such that decompressed data are created based on said compressed data (decompressing header portion col.1, line 15-28;

FIG.8B), and an output interface configured to communicate with said decompressor and to provide said decompressed data of said data packet (output interface continually receives data packets col.8, line 56-62), wherein said decompressor is configured to selectively decompress only compressed header data contained in a header section of said data packet (output interface continuously receives data packets col.8, line 56-62), wherein the decompressor is configured to decompress said routing information from said compressed header information (data packet contains routing information col.1, line 43-52).

Agarwal does not explicitly teach wherein said coded information is left unchanged by said routing and forwarding data packet to said output interface

However, Johansson teaches a system and method for routing information in a header compression and decompression applications (see Abstract) The system recognizes some header information will not change during a given packet flow or routing and forwarding to an output interface, examples of such unchanging (also referred to as stationary or static) header information include IP source and destination addresses. This unchanging header information will contribute an unchanging component to the checksums calculated in connection with the headers of the packet flow ([0009] [0023] [0026] FIG.4) in order to provide optimal efficiency and greater bandwidth in routing and forwarding such data packets ([0009] [0023] [0026] FIG.4)

It would have been obvious to a person having ordinary skilled in the art at the time the invention was made to have modified Agarwal by the teaching of Johansson to leave the coded information unchanged by said routing and forwarding data packet to

said output interface in order to provide optimal efficiency and greater bandwidth in routing and forwarding such data packets ([0009] [0023] [0026] FIG.4).

As per **claim 34** Agarwal teaches an apparatus according to claim 33, wherein said decompressor (header decompressor 1730 FIG.7) is configured to access to a header compression context table (header compression look up table col.4, line 66-col.5, line 4; FIG.6A) and is adapted to decompress said compressed data using at least one of data contained in at least one predetermined section of said header compression context table (decompressing data based on entries contained in the compression table col.7, line 12-18; FIG.8A), at least one predetermined mathematical decompression rule (using a decompression algorithm at the receiver col.4, line 61-col.5, line 4; FIG.8B).

As per **claim 35** Agarwal teaches an apparatus according to claim 33, wherein said decompressor is adapted to decompress from said compressed header section an identifier of an external network node that is the destination of said data packet (replacing the header compression identifier with other identifiers when transmitting the data packet over the communication link col.4, line 61-65; col.7, line 46-54; FIGs.5).

As per **claim 36** Agarwal teaches an apparatus according to claim 35, wherein said decompressor is adapted to decompress only said identifier of said network node that is the destination of said data packet (replacing decompressed header with other identifier in data packets col.5, line 1-4; FIG.7).

As per **claim 37** Agarwal teaches an apparatus according to claim 33, wherein said decompressor is adapted to decompress said complete compressed header

section of said data packet (replacing decompressed headers with others in data packets col.5, line 1-4; FIG.7).

As per **claim 38** Agarwal teaches an apparatus according to claim 33, wherein said decompressor is adapted to decompress a service classification code element from said compressed header section (decompressing coded information from compressed header portion into individual cells that were transmitted in frames i.e. classification codes col.12, line 37-60; FIG.7)

Claims 44-47 related to the same limitation set for hereinabove, where the difference used is the phrase '"apparatus" in claims whereas the wordings of the claims were interchanged within the claim itself and some of the claims were presented as a combination of two or more previously presented claims. This change does *NOT* effect the limitation of the above treated claims. Adding these phrases to the claims and interchanging the wording *DID NOT* introduce new limitations to these claims, the citations from the prior art have been inserted as needed. Refer to the cited prior art for more details and further mapping. Therefore these claims were rejected for similar reasons as stated above.

As per **claim 51** Agarwal teaches an apparatus according to claim 33, wherein the apparatus comprises a decompressor device (decompressor device 2600 FIG.11A).

As per **claim 52** Agarwal teaches an apparatus according to claim 44, wherein the apparatus comprises a router device (router device 70, 80 FIG.2A).

Response to Amendment

4. Applicant's arguments filed 01/14/2011 have been fully considered but they are not persuasive. The amendment submitted by the applicant does not overcome the rejection made by the examiner in the last office action. The applicant's argument has been considered carefully and does not provide the evidence for lack of motivation.

The applicant recites that the references do not disclose, teach or suggest the following argument;

- **Argument -1**

Applicant recites that the references do not disclose, teach or suggest "receiving a data packet at an input interface, said data packet comprising a header section and a pay-load section, said header section comprising a compressed header section containing coded information including routing information; decompressing said routing information from said compressed header section; including at least a part of said decompressed routing information into said data packet"

- **Response to Argument-1**

In contrary, the cited art teaches a method and apparatus for compressing and decompressing the headers of ATM cells or of segmented packets for processing data packets, wherein at an input interface, as shown in FIG.4, receiving a data packet comprising a header section and a payload section and means for combining compressed header with payload (1350), means for detecting header in compressed header and separating header from payload (1720), means for decompressing header (1730), and means for combining decompressed header with payload (1740) to form

cell/packets (see abstract, col.7, line 36-59; FIG.4) ATM is a transfer mode that sends 53 octet-sized packets of information across a network from one communication device to another. The 53 octets are assembled as a "cell", which comprises 48 octets of data information, referred to as the "payload", and 5 octets of "header" information (including the routing information). The header and data information must be organized into cells so that when the cells are filled, they can be sent when an open slot of 53 octets becomes available. the compressed header and payload are combined to form a compressed ATM cell and the cell is then ready for further processing and assembly into a frame for transmission (col.1, line 43-52; FIG.6B).

In addition, the cited art teaches a method of decompressing the transmitted compressed cell headers using a lookup table processing (col.7, line 16-18) As shown in FIG.7, The compressed header portion is forwarded to a header decompressor 1730 which accesses the decompression lookup table 1760 and converts each 3 octet compressed header into the full 5 octet header (col.12, line 47-63; FIG.7) FIG. 8B illustrates a flow chart for the steps taken in decompressing the compressed ATM cells. Starting at step 1801, the compressed ATM cell that is derived from the fixed-size frames is arranged in a queue and received. In step 1802, the compressed header and payload for each cell are separated, then in step 1803, the header for each cell is decompressed in accordance with an applicable algorithm that is based on the content of another look-up table (col.13, line 3-19;FIG.8B)

- **Argument -2**

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

As explained, the reference cited and references made up of record teach a routing data packets in a compressed header domain, whereas the examiner interpreted the claims to its broadest reason interpretation and has taken the language of the claims *As Written*, considering the invention as a whole. Also Applicant should consider the previously presented prior art from the updated search made of record and not relied upon, which is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See MPEP 707.05(c).

Conclusion

5. **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action

When responding to this office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections See 37 CFR 1.111(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdelnabi O. Musa whose telephone number is 571-2701901. The examiner can normally be reached on Monday Thru Friday: 7:30am to 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on 571-2726798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. O. M./
Examiner, Art Unit 2478

/Kenny S Lin/

Primary Examiner, Art Unit 2478